

Summary Description

This is the second in a series of 11 lessons that introduces the student to Biology.

Learning Objectives

To have the student learn a few key facts about food chains.

Approximate Time for Lesson

60 minutes

Suggested Maturity Level for Instruction

Student should be able to read simple words and perform simple addition and subtraction. Also, student should be able to sit still and engage in one-on-one conversation.

References:

Planetpals.com – Food Chain <http://www.planetpals.com/foodchain.html>

Materials Needed

1. Internet Access – Pull up the following:
 - a. Picture of desert food chain (go to <http://www.vtaide.com/png/foodweb/desert-sm.jpg>)
 - b. “11 Extinct Animals That Have Been Photographed Alive”, Bryan Nelson, EcoWorldly (go to <http://ecoworldly.com/2009/04/02/11-extinct-animals-that-have-been-photographed-alive/>)
 - c. “10 Animals On the Brink Of Extinction”, Jake Richardson, EcoWordly (go to <http://ecoworldly.com/2009/04/07/10-animals-on-the-verge-of-extinction/>)
2. Coloring Worksheet of Food Chain

Preparation

Make sure you have materials open, printed and/or available prior to beginning the lesson.

Script

Introduction (5 minutes)

1. Teacher: Alright, last lesson we learned about ecosystems. Can you tell me some of the different ecosystems that are in our world today? [Engage the Student in conversation, but any of the following are major ecosystems in our world: 1) urban, 2) desert, 3) forest, 4) grasslands, 5) ocean, 6) fresh water, and 7) tundra]
2. Teacher: Great, so now that we learned about ecosystems, we are now going to learn about something called the “food chains”. So, are you ready to learn about food chains? [Get positive response from Student and begin lesson]

Lesson (50 minutes)

1. Teacher: Good, now, before I explain what a food chain is, do you want to guess what a food chain could mean? [[Engage the Student in conversation](#)]
2. Teacher: Those are all good answers. A food chain is just a picture of how each living thing, plant or animal, eat each other in an ecosystem. Each living thing in the food chain is food for the next living thing and so on and so forth. So, for example, the food chain for a desert ecosystem could start with plants (like cacti, which mean more than one cactus), insects (because insects like beetles eat plants), then lizards (because lizards eat insects), and finally, hawks (because hawks eat lizards). All these plants and animals I mentioned live in a desert ecosystem. In fact, here's a good example of a picture of a food chain. [[Show Student picture of a desert food chain](#)]
3. Teacher: Now remember, there can be other food chains for the desert ecosystem that I didn't mention here. For example, another food chain could start with cacti, then the next animal to eat cacti would be humans (yes, some cacti can be eaten by people once the needles are removed). Still another example of a desert food chain could be plants, lizards, snakes, and hawks. So you can imagine then, that there are many food chains around the world.
4. Teacher: So, now that I gave you some examples of a food chain, do you understand what a food chain is? It's important that you understand this now because we're going to talk about it even more. [[Engage the Student in conversation until she understands the definition of a food chain](#)]
5. Teacher: Great. Now that you understand, I'm going to explain a bit more about this food chain.
6. Teacher: Now, no matter what kind of ecosystem it is, the food chain really starts with something that isn't living at all - the Sun. You may know this, but plants need sunlight to grow just like you need food to grow.
7. Teacher: You see, plants use their leaves to collect sunlight which they then turn into food - and not all living things can do this. In fact, any living thing that eats and grows by turning sunlight into food is called a "Producer".
8. Teacher: So, do you think humans are Producers? How about lions? Rabbits? Ants? [[Engage the Student in conversation and come to the point that these living things are not Producers because they cannot eat by turning sunlight into food](#)]
9. Teacher: That's right - these living things are not Producers because they cannot eat by turning sunlight into food.
10. Teacher: So, if humans and these other living things cannot eat the sunlight (sounds funny, huh?), then what do these living things need to eat to get energy? [[Engage the Student in conversation and come to the point that these living things must get their energy by eating other living things like plants and animals](#)]

11. Teacher: That's right - they need to eat other living things! And you know what living things that need to eat other living things are called? [\[Engage the Student in conversation\]](#)
12. Teacher: They are called "consumers". Can you say "consumers"? [\[Engage the Student in conversation\]](#)
13. Teacher: Great. Now, there are different kinds of consumers. Some kinds of consumers eat only plants. These kinds of consumers are called herbivores. Deer only eat leaves so they are herbivores. Other consumers, like lions, don't eat plants at all, they only eat meat - these kinds of consumers are called carnivores.
14. Teacher: So do you think people are herbivores or carnivores? [\[Engage the Student in conversation and come to the point that people eat both plants and meat\]](#)
15. Teacher: Sorry, that was a trick question. The truth is that people are not herbivores or carnivores because they eat both plants and meat. Animals that eat both plants and meat are called omnivores.
16. Teacher: And since all living things end up dying, there's one more group of living things that eat only dead things - these are called "decomposers". To decompose means to break down and return to the earth. Examples of decomposers are bacteria, which are things so small that you can't even see them without the help of a microscope. These bacteria love to eat dead things and when they eat them, they help make the dead things disappear.
17. Teacher: Well, by eating the dead things, the decomposers put back vitamins and nutrients back into the soil, which in turn, helps plants (remember the producers?) grow bigger, which then provide food for herbivores and omnivores, and the cycle keeps continuing forever.
18. Teacher: So, are there any questions about the food chain so far? [\[Engage the Student in conversation\]](#)
19. Teacher: Great, now what do you think will happen if one of the living things in the food cycle, all of a sudden, vanishes? What do you think will happen to the animals that eat these living things and depend on them for food? [\[Engage the Student in conversation and come to the point that if a particular living thing in the food chain disappears, then the animals that depend on that living thing for food will starve\]](#)
20. Teacher: That's right. And when that animal that depends on the living thing that disappeared starves, then the next group of animals that depend on that first animal for food will also start to starve. And so, this is why it is so important that the living things that belong to a food chain don't just disappear. And, get this; food chains are being put in danger by us humans.

21. Teacher: That's right. And do you know how we make living things disappear? [[Engage the Student in conversation](#)]
22. Teacher: Well, there are many ways, I suppose, to make living things disappear, but an example of just one way that we really hurt the food chain is when humans go into an ecosystem such as, say, a forest, and cut down all the trees so they can either use the wood from the trees for building houses or even clearing the entire forest to build something on, like an entire town.
23. Teacher: Now, for humans, cutting down trees seems ok since we need houses and towns to live in. But what happens to the animals that lived in those forests? [[Engage the Student in conversation but come to the point that the animals that used to live in those forests are usually killed or they run away to the next nearby forest](#)]
24. Teacher: And when these animals that used to live in these forests are gone, then what do you think happen to other groups of animals that feed on the animals that are gone? [[Engage the Student in conversation but come to the point that the group of animals feed on those animals that are gone start to starve and also have to move to where their food sources go](#)]
25. Teacher: Now, as long as there are forests that these animals can move to, it seems ok, but if humans cut down all the forests, then the animals will no longer have a home and probably die. This is really sad not only for these animals, but for other animals that feed on the first group of animals, because then, the animals that feed on the first group of animals will end up starving to death and then, the next group of animals that feed on the second group of animals will also be in danger of starving to death.
26. Teacher: And so, this is why it's really important that we, as humans, respect and care for the ecosystems around us. If we hurt too much of one ecosystem, we could destroy an entire group of animals and once they're gone, they will be gone forever.
27. Teacher: Before we finish our lesson, I want to show you pictures of animals that are now gone forever because their ecosystems were destroyed, not every time by humans, but destroyed nonetheless. [[Review the pictures and captions in the article, "11 Extinct Animals That Have Been Photographed Alive" - show Student enough pictures to make her understand that these were real animals that are now gone forever](#)]
28. Teacher: And here're some pictures of animals that are living today, but are in danger of disappearing forever. [[Review the pictures and captions in the article, "10 Animals on the Brink of Extinction" - show Student enough pictures to make her understand that these are real animals that are in danger of disappearing forever](#)]
29. Teacher: And finally, here's a coloring worksheet that you can color after our lesson today - it's a picture of the food chain that has producers, consumers, and decomposers. You can color it after today's lesson. [[Give the Student the Coloring Worksheet of the Food Chain](#)]

30. Teacher: Ok – time for review, stand up and get in front of the class (consider inviting other members of the family also to set the stage). [Ask Student the following:
- a. What is a food chain? A food chain is a picture of how each living thing, plant or animal, eat each other in an ecosystem.
 - b. What’s an example of a producer? Plants
 - c. What is an herbivore? A living thing that only eats plants
 - d. What is a carnivore? A living thing that only eats meat
 - e. What is an omnivore? A living that that eats both plants and meat
 - f. What is an example of an omnivore? Humans
 - g. BONUS QUESTION: Why is it important that we help take care of ecosystems in our world? Because if we don’t take care of the ecosystems, then groups of animals will die off and disappear forever.

Teacher reviews any questions that the Student missed].

Wrap Up (5 minutes)

Teacher: [Clapping] You did GREAT! Wonderful job! Are there any questions that you have regarding food chains? [Engage in conversation with the Student and follow up with questions you cannot answer by researching the Internet]